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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/753,208

01/07/2004

Thomas E. Drake JR.

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5646

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EXAMINER

SAINT SURIN, JACQUES M

ART UNIT

PAPER NUMBER

2856

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
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3 MONTHS

01/18/2007

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 01/18/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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glenda.orrantia@hotmail.com

# Office Action Summary

Application No.

10/753,208

Applicant(s)

DRAKE, THOMAS E.

Examiner

Jacques M. Saint-Surin

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 9-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. This office action is responsive to the amendment of 10/17/06.
2. The indicated allowability of claims 9-12 is withdrawn in view of the newly discovered reference(s) to Boyd et al. (US Patent 5,014,293). Rejections based on the newly cited reference(s) follow.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 103***

4. Claims 9 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd et al. (US Patent 5,014,293) in view of Halsey (US Patent 3,910,124).

Regarding claim 13, Boyd discloses an apparatus (scanner assembly shown in Fig. 1) for intact testing of an object, comprising, in combination:

means for scanning (CT scanner) the intact object (wing 40) mounted on a robot (Fig. 11 shows gantry 12 mounted on a support head attached to a hydraulically operated lever system which positions the gantry, see: col. 4, lines 23-27);

a structure (21) configured to contain said apparatus (computer system of Fig. 1) and said object (40) under inspection;

said robotic scanning means (12) supported by said structure (21) and including means to move (14, 16, 17 and 18) a scanning head (13) of said robotic scanning (12) means in three linear directions and at least two rotational directions (Boyd teaches five degrees of freedom, see: col. 3, lines 61-66 and col. 4, lines 1-10);

said apparatus is coupled to said structure (21), resulting in the formation of a gantry (12) for supporting a carriage (19), a mast (16) mounted on said carriage (19) and at least one of an emitter (32) and detector (33) mounted on said mast (16) which forms in part at least one inspection robot (see: Fig. 2) capable of precise positioning over large ranges of motion;

said at least one inspection robot (X-ray tube 32) further comprises a beam structure (37) for supporting and allowing horizontal translation (the support member 37 can be moved longitudinally along the space support beams 38, see: col. 3, lines 37-39) of said carriage (19);

said carriage (19) is coupled to said mast (16), wherein said mast (16) supports and allows a vertical translation (col. 3, lines 1-6 and 45-47) said at least one of the emitter (32) and detector (33) mounted on said mast (16), and wherein said mast (16) is configured to provide yaw movement of said at least one of the emitter (32) and detector (33) (transverse tomographs are obtained by scanning projection images at multiple angles, Fig. 8, col. 4, lines 3-5 and 28-33);

and said at least one of the emitter (32) and detector (33) is configured to provide rotation about at least one axis of roll and yaw motion of said at least one emitter (32) and detector (33). However, Boyd does not disclose or suggest means to correlate data derived from scanning the object to a standard and comparison means to correlate data from the scanning means to a standard. Halsey discloses as pointed out previously, an electronic "standard" can be fed into the computer or other analytic circuitry 70 for comparison with the array of signals transmitted thereto from the

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segmented receiver 58; the electronic standard can be correlated with a predetermined cycle of the previously described object movements for a given specimen (see: col. 9, lines 4-10). It would have been obvious to one having ordinary skill in the art at the time of the invention to utilize in Boyd the techniques of Hasley because scanning can then be repeated at various zoom positions for further condition analysis in order to provide a reliable and accurate inspection.

Regarding claims 11-12, Boyd discloses to scan an object, the gantry may be rotated or the x-ray source and detector array may be moved along the gantry, or both. (see: col. 3, lines 32-34). Boyd further discloses emitter 32 and detector 33.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd et al. (US Patent 5,014,293) in view of Halsey (US Patent 3,910,124) and further in view of Heyser et al. (US Patent 4,083,232).

Regarding claim 10, Boyd does not disclose said scanning means includes ultrasonics. Heyser discloses Transmitting and receiving ultrasonic transducers 10 and 11 are carried by a yoke 12 for rectilinear array scanning of a specimen 13 in a plane indicated by a dotted line on the specimen (col. 4, lines 37-40). It would have been obvious to one having ordinary skill in the art at the time of the invention to utilize in Boyd in view of Halsey the ultrasonic scanning of Heyser because by transmitting energy through a body in rectilinear scanning array patterns, detecting the attenuation of energy by the body in each raster of the scanning pattern, and recording attenuation detected as a function of scanning position for each of a plurality of scanning arrays 1

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through N, with a direction of energy propagation through the body at respective angles thereby, making the above combination very effective.


**Conclusion**


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacques M. Saint-Surin whose telephone number is (571) 272-2206. The examiner can normally be reached on Mondays to Fridays between 10:30 A.M and 800 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Jacques M. Saint-Surin  
January 07, 2007

  
HEZRON WILLIAMS  
SUPERVISORY PATENT EXAMINER  
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